

Europäisches Patentamt
European Patent Office
Office européen des brevets



(11) **EP 1 197 149 A2**

(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
17.04.2002 Bulletin 2002/16

(51) Int Cl.7: **A21B 3/13**

(21) Application number: 01123300.4

(22) Date of filing: 05.10.2001

(84) Designated Contracting States:
**AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU
MC NL PT SE TR**
Designated Extension States:
AL LT LV MK RO SI

• **Fortunato, Aldo**
20063 Cernusco sul Naviglio (IT)

(72) Inventor: **Meroni, Bruno**
20075 Lodi (IT)

(30) Priority: 18.10.2000 IT MI000590 U

(74) Representative: **La Ciura, Salvatore**
Via Francesco Sforza 3
20122 Milano (IT)

(71) Applicants:
• **Meroni, Bruno**
20075 Lodi (IT)

(54) **Flexible mould for confectionery, bread-making and similar, with support and stiffening element of the outer edge**

(57) This invention relates to a flexible mould made of silicone for confectionery, bread-making or similar, particularly suited to the use both in traditional ovens and microwave ovens, consisting of a tray provided, on the upper side, with an edge which extends outwardly, wherein this edge is equipped with a support and stiffening element, preferably consisting of a metallic wire dippen in the silicone or of plastic or metallic frame partially co-stamped at sight, or manually inserted into a corresponding seat provided in the edge.

This feature considerably improves the handling of the tray, especially when it contains very liquid products,

keeping unchanged those flexibility features that make easier to take fragile contents out of the oven and to deform and flatten it in order to store it into a reduced space.

Preferend embodiment of the invention provides for a reinforcing element consisting of a frame (10) (fig. 4) made of rigid or semi-rigid plastic material, which is inserted into a corresponding seat (11) made in the flexible edge (12) of the mould.

Preferably the frame (10) is inserted into a seat provided at the lower surface of the edge.

The outer part (12) of the edge overlaps at least part of the frame (10), which is so held in place.

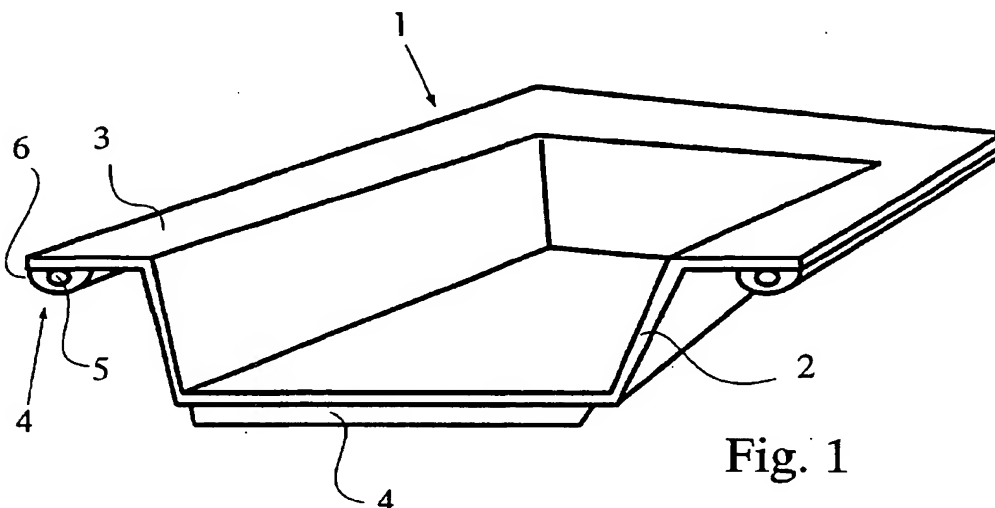


Fig. 1

Description

[0001] This invention relates to a flexible mould made of silicone for confectionery, bread-making or similar, particularly suited to the use both in traditional ovens and microwave ovens, consisting of a tray provided, on the upper side, with an edge which extends outwardly, wherein this edge is equipped with a support and stiffening element, preferably consisting of a metallic wire dipped in the silicone or of plastic or metallic frame partially co-stamped at sight, or manually inserted into a corresponding seat provided in the edge.

[0002] This feature considerably improves the handling of the tray, especially when it contains very liquid products, keeping unchanged those flexibility features that make easier to take fragile contents out of the oven and to deform and flatten it in order to store it into a reduced space.

[0003] As it is known, the moulds for confectionery and bread-making are always made of rigid material, such as for example metal like aluminium, or refractory materials such as ceramic or vitreous material, the latter used in particular in microwave ovens.

[0004] The rigid moulds present several disadvantages, from the difficulty to take the product out of the mould without breaking it, to unsuitable dimensions when the trays must be stored.

[0005] These disadvantages can be overcome by means of flexible trays made of fabric of proper fibres coated by a synthetic material such as silicone.

[0006] But also these trays present several disadvantages due to the difficulty to duly shape an unstretchable material such as the fabric, to obtain a tray with the required deepness.

[0007] With the mould of this invention is easier to take the product out of the mould, thanks to the elasticity and the flexibility of the material and it is likewise possible to store the moulds into a reduced space, thanks to the deformability of said moulds.

[0008] These known moulds include a duly shaped tray, provided, on the upper side, with an edge, always of silicone, which can extend outwards.

[0009] This edge allows to easily grip the tray and take out the product.

[0010] The silicone moulds represent an innovative product which can be perfected.

[0011] It was noted that the considerable flexibility and elasticity of the material creates some difficulties when there is the need to handle the moulds containing a product, especially if such product is very liquid.

[0012] Under the effect of the weight of the product the mould very flexible, tends to deform and if it is lifted by the edge, as usual, there is the risk to split part of the product.

[0013] To remove such disadvantage this invention proposes a silicone mould characterised by the fact to provide, near the edge, a support and stiffening element able to give the mould the resistance required to carry

the weight of the product without being deformed, keeping the flexibility features which allow to guarantee other advantages listed above.

[0014] The mould according to the invention is characterised by the particular embodiment which improves the handling of the product, increasing its usefulness and practicalness of use.

[0015] This invention will be described in details, by way of example without any limitation thereto, with reference to the attached figures, in which:

- figure 1 represents the section of a mould according to the invention;
- figure 2 is the perspective view of the mould of figure 1;
- figures 3 and 4 are perspective views, in section, of further forms of execution of said idea of solution.

[0016] With reference to the attached figures, 1 indicates, in its whole, a mould according to the invention, essentially consisting of a tray 2 in which the product to be cooked or heated is inserted and that is provided, on the upper side, with an edge 3 essentially consisting of a wing projecting outwards.

[0017] Both the tray 2 and the wing 3 are completely made of silicone.

[0018] The silicone is a material able to resist to the temperatures of the oven and turned out to be suitable to this aim thanks to its resistance and flexibility features.

[0019] Peculiarity of the invention is to provide, near the perimetral area of the edge or wing 3, a support indicated with 4, essentially consisting of a metallic element 5, preferably a metallic wire such as steel the like, dipped into a silicone coating 6.

[0020] The fact of providing the metallic wire dipped into the silicone, allows to use the mould even in a microwave oven.

[0021] The stiffening wire will have such dimensions as to allow the mould not to bend under the strain of the content, but such as to allow in any case a sufficient flexibility of the wings 3 and of the entire tray body.

[0022] The material can be steel or, in any case, other suitable plastic material.

[0023] The stiffening element 5 can be directly incorporated into the mould during the injection of the silicone material, or, if necessary, it may also be applied afterwards, duly inserted into seat provided in the silicone.

[0024] Through this solution the mould may be easily handled, gripping it by the edges, even when it contains a liquid product, because the resistance of the support element 5 allows the mould to keep its shape without bending under the strain of the content. The silicone flexibility will always allow to easily take the product out, to press the mould and to store it taking up a minimum space.

[0025] A skilled in the art may make changes and different versions that must be considered included within

the competence of this invention.

[0026] In particular, in lieu of the metallic support element, one can provide a rigid plastic frame co-stamped with the silicon edge or taking the place of the latter, and which is applied for example by pressure, to the mould body, as shown in figure 3. 5

[0027] A further preferred embodiment of the invention provides for a reinforcing element consisting of a frame 10 (fig. 4) made of rigid or semi-rigid plastic material, which is inserted into a corresponding seat 11 made in the flexible edge 12 of the mould. 10

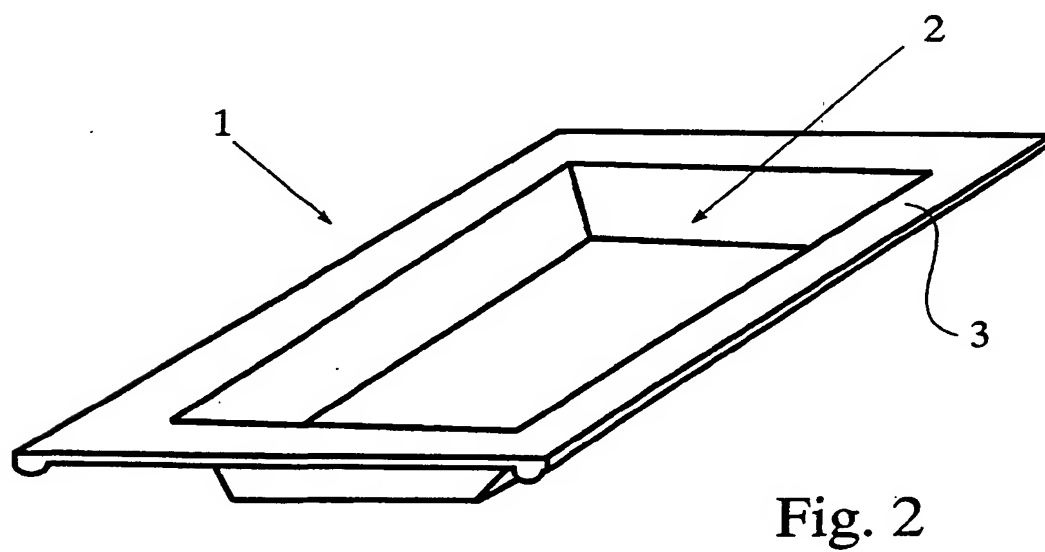
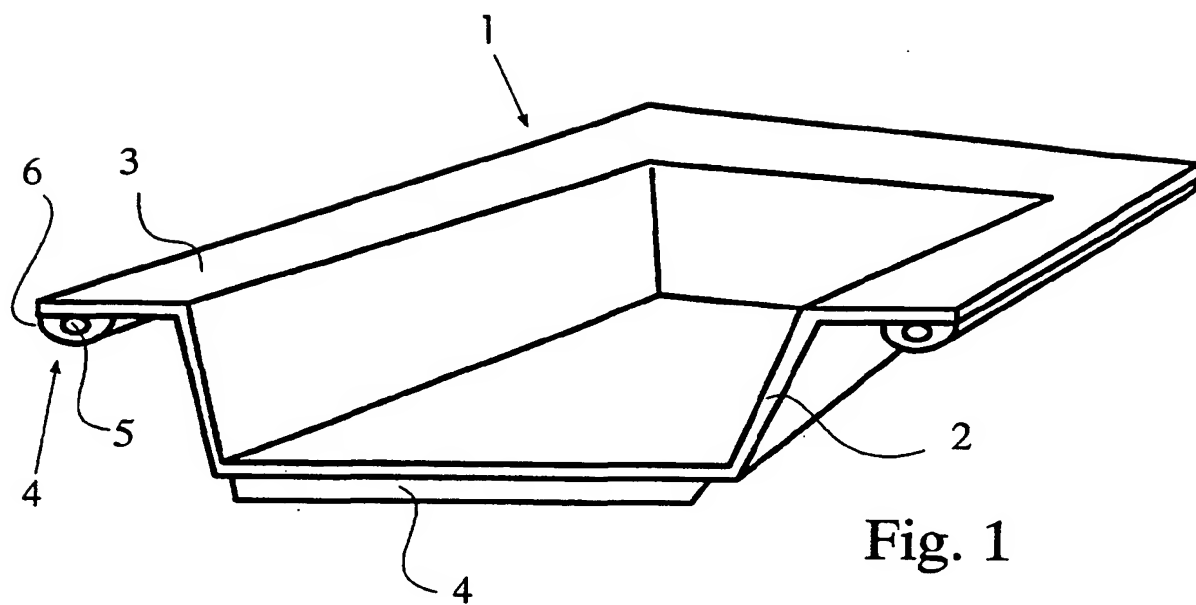
[0028] Preferably the frame 10 is inserted into a seat provided at the lower surface of the edge.

[0029] The outer part 12 of the edge overlaps at least part of the frame 10, which is so held in place. 15

Claims

1. Flexible mould for confectionery and bread-making, comprising a silicone tray with an outwards projecting edge, **characterised by** the fact to provide a support element applied to said edge to give the mould a certain resistance, such as to avoid any deformation under the strain of the content. 20 25
2. Flexible mould according to claim 1, characterised by the fact that the support is dipped into silicone.
3. Flexible mould according to claim 2, **characterised by** the fact that the support element is dipped into the silicone near the peripheral portion of the edge. 30
4. Flexible mould according to claim 3, **characterised by** the fact that said support element is formed by a threadlike metallic element. 35
5. Flexible mould according to claim 1 wherein said support element is formed by a plastic element applied to the tray. 40
6. Flexible mould according to claim 5 wherein said frame is co-stamped with the tray.
7. Flexible mould for confectionery and bread-making according to claim 1, wherein said frame is inserted into a seat provided in the silicone edge. 45
8. Flexible mould for confectionery and bread-making according to claim 7, **characterized in that** said frame is inserted into a seat provided in the lower part of the edge, and wherein the outer part of the edge overlaps at least part of said frame. 50

55



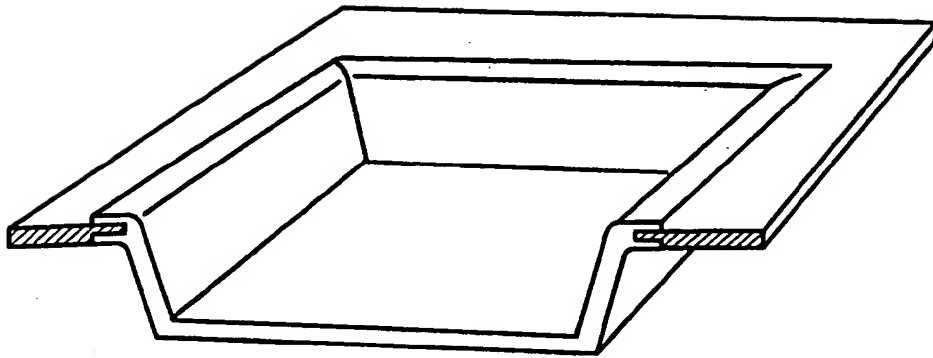


Fig. 3

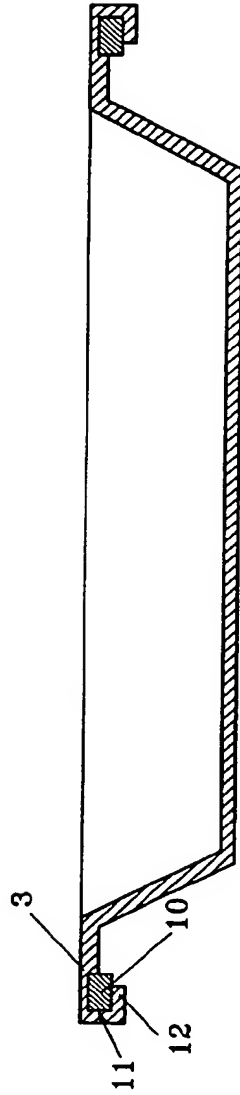
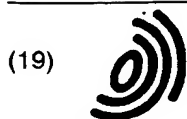


Fig. 4



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11)

EP 1 197 149 A3

(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3:
29.01.2003 Bulletin 2003/05

(51) Int Cl.7: **A21B 3/13**

(43) Date of publication A2:
17.04.2002 Bulletin 2002/16

(21) Application number: **01123300.4**

(22) Date of filing: **05.10.2001**

(84) Designated Contracting States:
**AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU
MC NL PT SE TR**
Designated Extension States:
AL LT LV MK RO SI

• **Fortunato, Aldo**
20063 Cernusco sul Naviglio (IT)

(72) Inventor: **Meroni, Bruno**
20075 Lodi (IT)

(30) Priority: **18.10.2000 IT MI000590 U**

(74) Representative: **La Ciura, Salvatore**
Via Francesco Sforza 3
20122 Milano (IT)

(71) Applicants:
• **Meroni, Bruno**
20075 Lodi (IT)

(54) **Flexible mould for confectionery, bread-making and similar, with support and stiffening element of the outer edge**

(57) This invention relates to a flexible mould made of silicone for confectionery, bread-making or similar, particularly suited to the use both in traditional ovens and microwave ovens, consisting of a tray provided, on the upper side, with an edge which extends outwardly, wherein this edge is equipped with a support and stiffening element, preferably consisting of a metallic wire dippen in the silicone or of plastic or metallic frame partially co-stamped at sight, or manually inserted into a corresponding seat provided in the edge.

This feature considerably improves the handling of the tray, especially when it contains very liquid products,

keeping unchanged those flexibility features that make easier to take fragile contents out of the oven and to deform and flatten it in order to store it into a reduced space.

Preferend embodiment of the invention provides for a reinforcing element consisting of a frame (10) (fig. 4) made of rigid or semi-rigid plastic material, which is inserted into a corresponding seat (11) made in the flexible edge (12) of the mould.

Preferably the frame (10) is inserted into a seat provided at the lower surface of the edge.

The outer part (12) of the edge overlaps at least part-of the frame (10), which is so held in place.

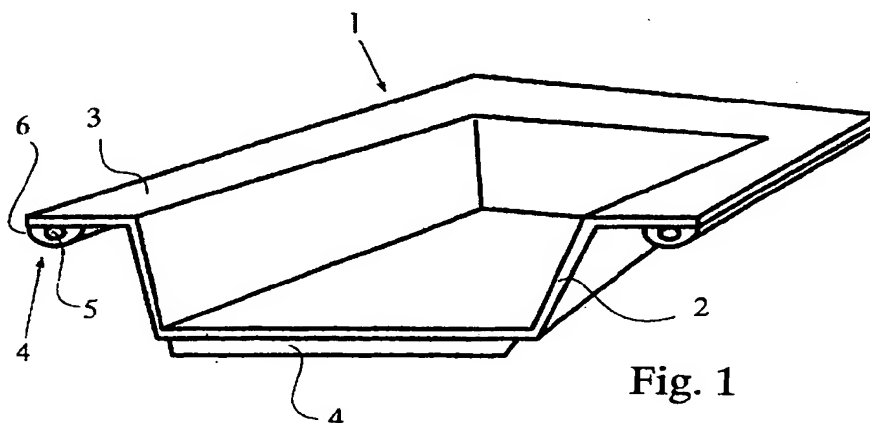


Fig. 1



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 01 12 3300

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
P, X	EP 1 132 000 A (FORTUNATO ALDO ; MERONI BRUNO (IT)) 12 September 2001 (2001-09-12) * the whole document *	1-8	A21B3/13
A	GB 1 159 021 A (MERCER ET AL) 23 July 1969 (1969-07-23) * the whole document *	1,4	
A	GB 305 833 A (ANDREAS BOTHE) 14 February 1929 (1929-02-14)		
A	US 2 237 102 A (HUNGERFORD WARREN H) 1 April 1941 (1941-04-01)		
A	US 2 241 781 A (JACKSON JOSEPH G) 13 May 1941 (1941-05-13)		
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			A21B
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 9 December 2002	Examiner Silvis, H
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

EPC FORM 1503 03/02 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 01 12 3300

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

09-12-2002

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 1132000 A	12-09-2001	IT MI20000432 A1	06-09-2001
		IT MI20000590 U1	18-04-2002
		EP 1132000 A1	12-09-2001
		EP 1197149 A2	17-04-2002
GB 1159021 A	23-07-1969	NONE	
GB 305833 A	14-02-1929	NONE	
US 2237102 A	01-04-1941	NONE	
US 2241781 A	13-05-1941	NONE	

EPO FORM P/459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

THIS PAGE BLANK (USPTO)